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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,146	03/05/2002	Chikaho Ikeda	112116	5449
25944	7590	08/10/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320				EXAMINER FLORES RUIZ, DELMAR
				ART UNIT 2828
				PAPER NUMBER

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/090,146	IKEDA, CHIKAO	
	<b>Examiner</b>	<b>Art Unit</b>	(RW)
	Delma R. Flores Ruiz	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 April 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 3, 9, 11-13, and 15 - 29 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1, 2, 4 – 8, 10, 14 and 30 – 33 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/21/05</u> | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### ***Election/Restrictions***

Applicant's election with traverse of apparatus for driving a light-emitting element in response to input data (claims 1, 2, 4 – 8, 10, 14 and 30 – 33) in the reply filed on 04/25/2005 is acknowledged. The traversal is on the ground(s) that all species is sufficiently related that a thought search for the subject matter of any species would encompass a search for the subject matter of the remaining species. This is not found persuasive because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper. The requirement is still deemed proper and is therefore made FINAL.

Because these inventions are distinct for the reasons given above and the search required for Group II, III is not required for Group I, restriction for examination purposes as indicated is proper.

Claims 3, 9, 11 – 13, and 15 – 29, are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 04/25/2005.

***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 7/21/2005 have been considered by the examiner.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1, 2, 4 – 8, 10, 14 and 30 – 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1, 6, 14, 30, and 32 the recitations “*a voltage source; a switch section disposed between the voltage source and the light emitting element (LED), a resistance value from an output end of the voltage source to a drive end of the light emitting element (LED) is smaller than an internal resistance value of the light emitting element; and wherein a current flowing into the voltage source is smaller than a current flowing into the LED, voltage and current driving section, and error amplifying section*” are considered indefinite and unclear for

the following reasons (Te examiner will interpret Figure 8 as the figure that distinctly shows the limitations of the claims as discussed during an interview conducted on 05/04/05 with applicant's representative for the purpose of clarifying the rejection that follows);

With respect to claim 1, the recitation " voltage source" is unclear since even thought the specification refers to a "voltage source", it indicates the presence of more than one voltage source as shown in Figure 8 (Voltage source =  $V_{bias}$ , section #22 or  $V_{ref}$  or  $V_{cc}$  referred to as #24, #233-1, #233-2 or #233-36 sections containing said sources without numbering them). In addition, said sources are ground sources. Does applicant means that said ground sources are the voltage sources as claimed? Can the voltage source claimed be one of the sources mentioned above or is it distinctly one of them? How is the current flowing throughout the claim circuit if the sources are ground?

With respect to claim 1, the recitation "switching section" is unclear since even thought the specification refers to a "switching section", it indicates the presence of more than one switching section as shown in Figure 8 (switching section= # $SW_1$ , or # $SW_2$  or # $SW_{fb1}$  or # $SW_{fb2}$  or # $SW_{1fb3}$  or # $SW_{1fb4}$  or # $SW_{fb4}$  or # $SW_{ib36}$  or switch section in #233-1; #233-2, or #233-36 sections containing said switching section without numbering them). Which from the multiple switches disclosed is turning the system on

and off? Do the rest of the switches have different functions or they perform the same function at the same time for different regions of the circuit?

With respect to claim 1, the recitation “drive end of the LED” is unclear since even though the specification refers to a “drive end of the LED”, it indicates the presence of more than one drive end of the LED as shown in Figure 8 (Drive end of the light emitting device LD<sub>36</sub> or LD<sub>1</sub> or LD<sub>2</sub>). Which of the LED disclosed is the applicant referring to? Are all LED elements driving the circuit at the same time or the remaining LED elements are performing another function per section?

With respect to claim 1, the recitation “Resistance value” is unclear since even though the specification refers to a “resistance value”, it indicates the presence of more than one resistance value as shown in Figure 8 (Resistance value of VR, R or resistance in 233-1, 233-2, or 233-36 sections containing said resistors without numbering them). Which of the resistors disclosed is the applicant referring to? Are all resistors performing the same function at the same time or the remaining resistors are performing another function per section?

With respect to claim 1, the recitation “internal resistance” is unclear since even though the specification refers to a “internal resistance”, however, the figures fails to show the internal resistances related to the respective LED elements. Where is this

internal resistance located in the circuit and what function will perform with respect to the existing elements and in general?

With respect to claim 1, the recitation “ a current flowing into the voltage source is smaller than a current flowing into the LED” is unclear because it is not understood what is changing the density of the current thought out the circuit. Is there a mathematical relationship between the current density of both elements or there is a electric element causing said change in the current? Is the voltage source providing a smaller current that during the current flow into the circuit provokes that current to increase by an electric element, a mathematical relationship or other factor?

**Clarification is required.**

With respect to claims 2, 4 – 8, 10, and 30 – 33, the 112 above apply for the same reasons.

With respect claim 2 in addition, the recitation “negative feedback loops” is unclear since even though the specification refers to a “negative feedback loops”, however, the figures fails to show the current driving section related to the respective the LED. Where is this negative feedback loops located in the circuit and what function will perform with respect to the existing elements and in general?

With respect to claims 2 and 5, in addition, the recitation “buffer amplifier” is unclear since even though the specification refers to a “buffer amplifier”, it indicates the presence of more than one buffer amplifier as shown in Figure 8 (buffer amplifier = #231 or #232 or buffer amplifier in #233-1, #233-2, or #233-36 sections containing said error amplifying section without numbering them). Does the rest of the buffer amplifier have different functions or they perform the same function at the same time for different regions of the circuit?

With respect to claims 5 and 10, in addition, the recitation “ retaining section” is unclear since even though the specification refers to a “retaining section”, however, the figures fails to show the retaining section related to the respective voltage elements. Where is this retaining section located in the circuit and what function will perform with respect to the existing elements and in general?

With respect to claim 6, the recitation “first and second voltage source” is unclear since even though the specification refers to a “first and second voltage source”, it indicates the presence of more than two voltage source as shown in Figure 8 (Voltage source =  $V_{bias}$ , section #22 or  $V_{ref}$  or  $V_{cc}$  referred to as #24, #233-1, #233-2 or #233-36 sections containing said sources without numbering them). In addition, said sources are ground sources. Does applicant means that said ground sources are voltage sources as claimed? Can the voltage source claimed be one of the sources mentioned

above or is it distinctly one of them? How is the current flowing throughout the claim circuit if the sources are ground?

With respect to claim 14, the recitation “voltage driving section” is unclear since even thought the specification refers to a “voltage driving section”, it indicates the presence of more than one voltage driving section as shown in Figure 8 (Voltage driving section =  $V_{bias}$ , section #22 or  $V_{ref}$  or  $V_{cc}$  referred to as #24, #233-1, #233-2 or #233-36 sections containing said sources without numbering them). In addition, said sources are ground sources. Does applicant means that said ground sources are the voltage sources as claimed? Can the voltage driving section claimed be one of the sources mentioned above or is it distinctly one of them?

With respect to claim 14, the recitation “switching driving section” is unclear since even thought the specification refers to a “switching driving section”, it indicates the presence of more than one switching driving section as shown in Figure 8 (switching driving section = # $SW_1$ , or # $SW_2$  or # $SW_{fb1}$  or # $SW_{fb2}$  or # $SW_{1fb3}$  or # $SW_{1fb4}$  or # $SW_{fb4}$  or # $SW_{ib36}$  or switch section in #233-1, #233-2, or #233-36 sections containing said switching driving section without numbering them). Which from the multiple switches disclosed is turning the system on and off? Does the rest of the switches have different functions or they perform the same function at the same time for different regions of the circuit?

With respect to claim 14, the recitation “current driving section” is unclear since even thought the specification refer to a “current driving section”, however, the figures fails to show the current driving section related to the respective the LED. Where is this current driving section located in the circuit and what function will perform with respect to the existing elements and in general?

With respect to claim 30, in addition, the recitation “error amplifying section” is unclear since even thought the specification refers to a “error amplifying section”, it indicates the presence of more than one error amplifying section as shown in Figure 8 (error amplifying section = #231 or #232 or error amplifying section in #233-1, #233-2, or #233-36 sections containing said error amplifying section without numbering them). Does the rest of the error amplifying section have different functions or they perform the same function at the same time for different regions of the circuit?

With respect to claims 31, the rejection for 2, 5, and 30 applies.

With respect to claims 32, the rejection for 1, 14 and 30 applies.

With respect to claims 31, the rejection for 2, 5, and 30 applies

**Corrections and clarification are required.**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

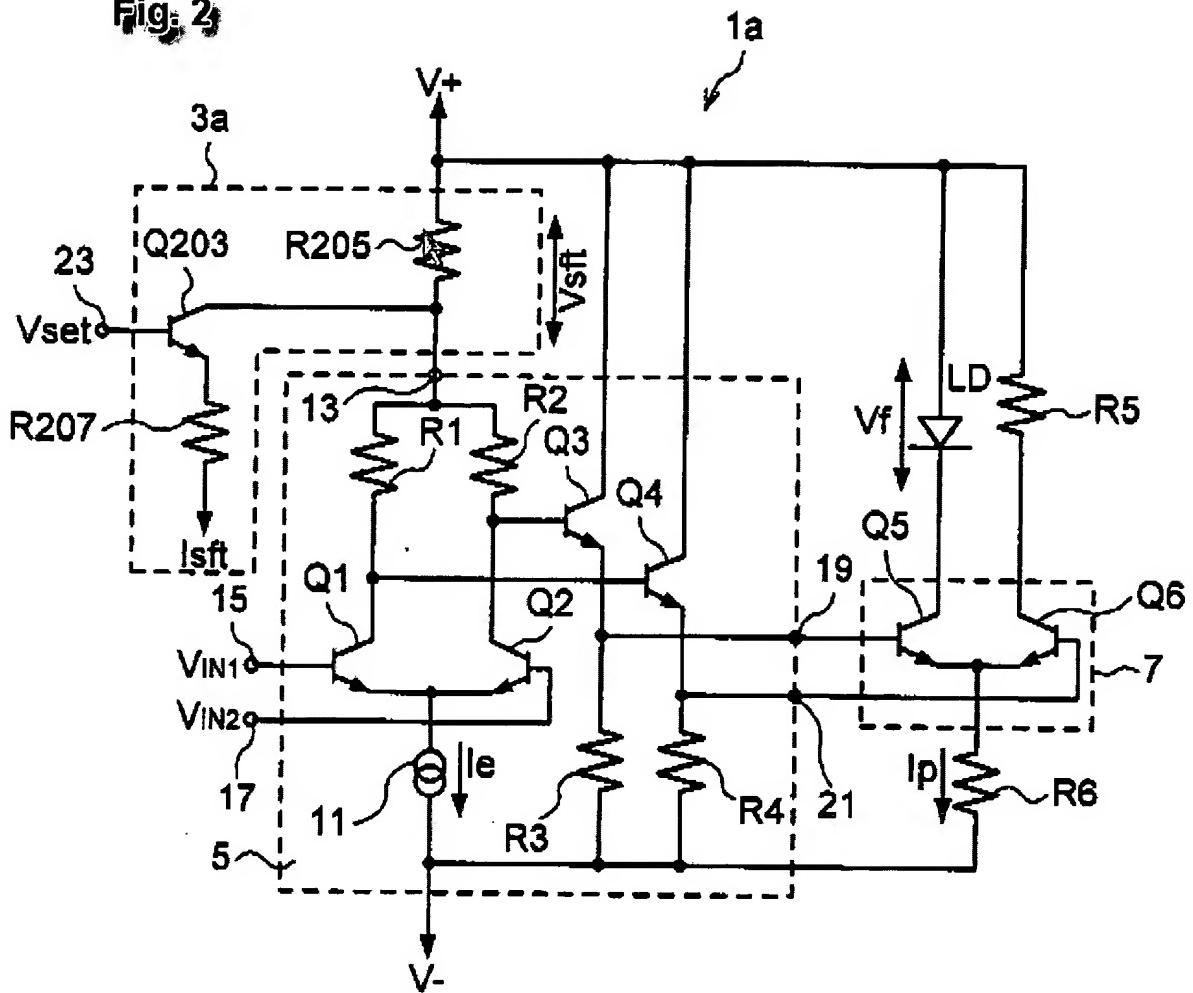
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Kikuchi (6,510,168).

***Regarding claim 14*** Kikuchi discloses an apparatus for driving a light emitting element in response to input data, the light emitting element emitting light by causing a direct current to flow thereto, (see Fig. 2, Character 1a) the apparatus comprising: a voltage driving section (see Fig. 2, Characters V+ and V-) for driving the light emitting element (see Fig. 1, Character LD) with voltage; a current driving (see Fig. 2, Character Ip) section for driving the light emitting element with a current; and a switching section (see Fig 2. Character 7) for changing voltage drive by the voltage driving section and current drive by the current driving section based on the input data (see Fig. 2, Abstract, Column 1, Lines 52 – 55, Column 4, Lines 1 – 57).

Discloses Fig. 2, by Kikuchi

Fig. 2



***Conclusion***

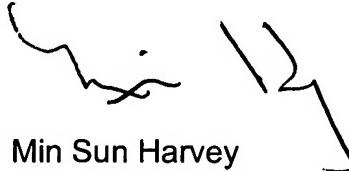
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (571) 272-1940. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on (571) -272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Delma R. Flores Ruiz  
Examiner  
Art Unit 2828



Min Sun Harvey  
Supervisor Patent Examiner  
Art Unit 2828

DRFR/MH  
July 25, 2005